THE DYNAMIC INTERPRETATION OF DEMENTIA PRÆCOX[1]

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Up to recent years the ambition of scientific medicine was to trace all morbid conditions to some kind of anatomical lesion. This inevitably left a large field in which there was 'no pathology as yet,' and therefore a suspicion of inevitable chaos. The trend of the last decade and the experience with biological serum-reactions and especially also the progress of psychiatry has, however, greatly strengthened a *functional* and *biological* view of the events in living beings, so that the work of *pathology* appears to us primarily as the *determination of causal chains or conditions with the accuracy of an experiment*, and the lesions then take their place among the simple facts or symptoms, according to the extent to which they can be understood in terms of dynamic developments, *i. e.*, of cause (or conditions) and effect.

This functional way of seeing things has the great advantage of allowing us to arrange the facts as we see them.

Most attempts at translation of the functional facts into neurological homologies leave out the actual amount and duration of the function, and the all-important laws of compatibility and incompatibility of sequences, and the discrimination between what are *moving factors* or more decorative staging or incidents. Turning to the functional and dynamic conceptions allows us to remain true to neurological conceptions where we are entitled to any and yet to take in the entire psychological setting without which the events would be difficult to grasp, artificial and devoid of the spark of life and interest to most physicians.

The dynamic conception which I shall present in this lecture is not *new* in one sense, but in another it *reconquers* and makes safe the ground of common-sense psychology abandoned by medicine during the struggle against superstitions and also under the influence of philosophical speculations, now become indispensable again if we wish to bring differentiation into our field and account for, and explain, the

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events constituting mental disorders. I have been said to resurrect the layman's opinion of the causes and nature of mental disease. I grant that to some extent; but we are also adding the *conditions* and critical safeguards under which we are justified in accepting and pursuing our normal instinctive interpretations.

Among mental diseases certain chains of events recur with such regularity that they become valuable clinical units or reaction-types.[1] When the development appears natural and plausible we consider the disorder accounted for and, under certain conditions, explained. In this respect, we find for instance that the so-called organic dementias are accounted for and to some extent explained by the extent and kind of brain disease, determination of which tells us what the symptoms and the development must have been or would probably be. In a more functional field, we find the deliria of intoxication, perhaps not explained, but empirically accounted for by a sufficient amount of intoxicant material *and* personal disposition. In a second place we may rank certain depressions and excitements and paranoic developments of which we may say that they come nearer and nearer being both explained and accounted for psycho-biologically; when we have all the facts, they are apt to rank fairly plainly as exaggerations of relatively normal reactions, as is the case with many depressions and delusional states. In a third place there are, however, disorders which seem to defy both explanation and accounting for; among these figure, according to the claims of many physicians, certain disorders prominent in the *dementia præcox* group. In order to be on concrete ground, I shall now briefly state a few of the types to be compared and discussed; and in view of the fact that we have with us the most fruitful workers on the problems of detail, I have chosen to limit myself especially to the broader settings in cases which anybody can find and study and form his own impressions and estimates on.

The following sketches form the material of our discussion:

A young man said to have been bright at school and in his early environment is transplanted from the South to New York at 22 (1903), fails to make friends, becomes morose and morbid and seclusive, especially after finally losing his position (Christmas, 1904); he resorts to quack-treatment for sexual neurasthenia, and finally goes to a general hospital with vague complaints of general weakness (Spring of 1905). Then, at home for six weeks, he showed *more* seclusiveness, was noticed to smile and talk to himself in an unexplained manner, imagined he was followed, in other words had the feeling of being at a disadvantage, and of mistrust and day-dream-like reac-

[1] *The Psychological Bulletin*, Vol. V, No. 8, p. 245. The Problems of Mental Reaction-types, Mental Causes and Diseases.

tions, not clearly sized up by the family, until May 31, 1905, after a restless and probably sleepless night, a tantrum precipitated the recognition of the condition. The young man came to breakfast unkempt, ate, then suddenly got up, shook hands with his mother, said she was the best mother he ever had and announced: 'Between you and me and E (sister) I am going to be President of the United States.' The mother was (probably quite unnecessarily) frightened, he tried to hold her; she escaped and he then shouted and broke up the furniture and the chandelier. When he came to the hospital he regretted the violence, said he did not know at the time what he was doing; 'It seemed like a feeling took control of me.' He remembered it all clearly, and added that at times he felt as if *somebody* was taking something out of him when they spoke, 'some of my mind, my intellect, my power'—feelings and judgments very characteristic of this type of dissociation of the personality. At the hospital he was able to occupy himself for a while but gradually grew more irritable and offish, more and more dull and finally passed into a classical negativistic stupor (with catalepsy, refusal of food and mutism) from which he rose to some extent in the course of a few years, but with decided dilapidation, gross indifference, tendency to lounging about, with an occasional semblance of distractibility and flight of talk, but absence of any spontaneous push or interests—a classical instance of terminal dementia.

Heredity is denied in this case. Early masturbation stands in the centre of a distinct bias; circumstances and this bias encouraged solitude, hypochondriacal ruminations, feelings of disadvantage, neglect of himself, a shirking of the usual balancing helps offered by the common habits of social and practical life of the environment; then came more positively morbid reactions: mistrust, ideas of being followed, and silent mulling over thoughts never brought to any control by action, or even to simple open ventilation, as shown in the smiling and muttering to himself. Of this long period we only know the further frustration of interest in even the ordinary personal attentions and ambitions, and a peculiar notion that the doctor and nurses stole his soul (probably an imagination partly based on the feeling of disadvantage in comparisons of his empty state with the healthy, vigorous and superior persons with whom he had forced and otherwise dodged contact), and the episodes of probably very empty compensatory pleasurable moods of mere smiles, and mutterings of matters enjoyed by himself but probably less and less fit to be spoken out, less likely to stand the criticism that comes to outspoken words and to stimulate desire for communication. Finally we see the culmination in a sleepless night, and the tantrum at breakfast which felt like a discharge of tension, forced, 'like a feeling took hold' of him, an action by something not quite himself, and in it a characteristic rise to a *contrast* and *compensation* where concrete life brought nothing but failures; and finally a complete avoidance of the trial method which might have balanced his ruminations. Then comes further evidence of queer interferences of thought; some of his mind, his intellect, his power was taken from him—a very frequent interpretation of defect of integration, of blocking and of interferences felt in these states of insufficiency and incongruity of thought and action. Finally there is the development of a most protracted and biologically elementary shrinking into himself with the classical catatonic stupor in which the patient is a mere bundle of tense inactive self-defense, and, after the relaxation of the tension, an emersion of only the most inferior residuals of his interests and stock of endowment and training—a scattered, dilapidated condition rather than

an elementary dementia; inadequacy of emotions and interests and corresponding superficiality and reduction of volition and activity.

I pass over a similar case in which I originally (1905) formulated the evolution of the psychoses in terms of habit-conflicts which shows even more clearly the curve of transformation: masturbation from 9; decline of efficiency at school from 11, at the same time desire to become a teacher, mainly on account of the neatness of dress; frequent headache; two attempts at outside employment, then retired and rather secluded existence at home, excessive shame over the development of a small patch of gray hair; headaches and sleepiness in the morning; later ideas of having a tape worm; an operation for hemorrhoids at 21, with fear that her rectum would close up; then amenorrhœa with worry over her sexual misdeeds; futile attempts to make a better start; she bought paper and pens to become a book-keeper, but never got further; she would insist that she was a 'good girl;' she began to sleep poorly, became afraid at night, and at a party she complained that everybody looked at her. Then came a peculiar religious zeal; she poured kerosene oil on the steps for holy water; she ran to church at midnight; at Bellevue hospital she said—'I hear angels telling me how to pray when I lose my thought'—evidently a happy interpretation of the blocking and feeling of automatism; she scalded her right arm to save the world, soiled herself ('I had to be once more a baby'), developed a peculiar religious-symbolic talk and attitude, at times with senseless moralizing and ecclesiastic utterances with an undercurrent of salvation achieved or longed for, for herself and the world, and passed into a semi-ecstatic catatonic stupor which relaxed after a few years but left the patient in an apathetic so-called 'terminal' state, in the absence of any adequate balancing material before the attack. Again habit conflicts, gradual decline of efficiency balanced by empty ambitions, a series of incomplete attempts to rise, seclusion, hypochondriasis, finally a religious-fantastic compensation of catatonic form and lack of reintegration.

Another type in which the element of tension did not enter in the same manner is that of a young woman stenographer, committed at the age of 21, the child of a thriftless father, and sister of a young man who passed through a transitory mental upset at 20, and two relapses since; the patient had spent several years at a protectory, was bright in her studies, took up dressmaking and shortly after stenography and typewriting. She became, however, indifferent and lazy, remained in bed as late as possible in the morning. She became discontented at home, induced her mother to move into apartments beyond their means and asked her for money to take dancing lessons to go on the stage. October, 1906, she was dismissed from her position because of tardiness in reaching the office. She did not care, tried other positions but could not hold them. When in April, 1907, her brother was sent to a hospital, she became very seclusive, did not leave the house except for business or church. She said later that at that time she learned that her brother masturbated. She read more and more theatrical journals and romantic stories, bought peroxide to bleach her hair, and a preparation to remove the hair from her arms. During the summer of 1907 she spoke occasionally of a young Jew in the office paying attention to her. One night she awakened from a dream screaming; she told her mother that the day before, this young man had put his arms around her neck. She got impure thoughts, confessed having long indulged in masturbation; she admitted that she had thought of this young man in her dream. She gave up her position, feared the men would see her shame in her eyes. Her mother then noticed that her mouth and nose twitched in a peculiar way,

she appeared depressed, threatened to end her life; she was taken to a general hospital where she remained four days and was then transferred to Bellevue and finally to our service.

On admission the patient was quiet, spoke in a subdued voice; at times her expression was rather anxious but she could be easily induced to smile; there was much twitching of the upper lip with dilatation of the nostrils, aud quivering of the brow muscles; she did not seem to be afraid yet she uttered many apprehensive ideas and expressed much fantastic horror over the surroundings, asked if they would choke her and bind her down or put her in a cage and make her walk on all-fours. She talked quite freely and often complained of her mind wandering; of inability to concentrate, used many but half-understood words, and remarked that she was not talking connectedly. She referred the talk of other patients to herself and spoke many times of hearing voices. When the nurse rattled her keys, she remarked: "I hear chains—I know I was blind and my brain is turned at the present moment." When asked what her difficulty was she said: "The thing that is uppermost in my mind is a fear that my mother and my brother will go insane if I die—if I—if I am fumigated—this isn't a very connected speech is it?" When asked to explain what she meant by fumigated she remarked: "It means burned up, don't it and thrown to the four winds—you are writing down all I say." When she heard some patients talking in the sitting hall she remarked: "Is n't that terrible those voices out there—that woman is saying I am insane—after this she will punish me—do something terrible to me—put me in a cage and I will have no shame left."

She told of the young man in the office who had put his arms around her and said that later she had a dream in which this young man tried to 'hurt' her; she resisted; after that she had the idea that the young man knew what she had dreamt about. Before she had the dream she had seen this young man make lewd motions and he had winked at her. She thought she had ruined herself by masturbation—"I was ashamed to look at any man—I thought they saw what I had done in my eyes."

The patient was clear as to her whereabouts and her memory was good: she did calculations correctly and promptly.

Her general physical condition was good; she was menstruating when admitted.

Following her admission she was languid, expressed many apprehensive ideas, but did not appear to be in any fear; she complained a great deal of hearing voices, but it was difficult to get her to specify what she heard. She continued to complain that her mind wandered, things were mixed up, she could not concentrate and admitted that bad thoughts kept coming into her mind. Once she asked the physician: "Can't you throw something on me like water to wake me up—I don't know if I am dreaming or not—I used to be tidy but now I am horrible, I don't take care of my person any more." Another time she asked: "Am I crazy, will I ever get over this?" When questioned she was inclined to cover her face, she wished to avoid the physician and expressed feelings of shame.

She was able to do the thinking tests without any special difficulty. grasped the point of what she read fairly readily, but occasionally she gave rather peculiar answers when questioned about her school knowledge and her thoughts at times seemed to be quite scattered.

While in her general demeanor she appeared dejected she never spoke of being sad and she frequently smiled even when uttering anxious ideas—*e. g.*, she remarked with a smile: "I am afraid of being killed." She complained a great deal of feeling strangely, she talked

of shocks of electricity going through her body and of little strings running through her skin; very often she referred to such ideas as 'imaginations.' She spoke of talk from inside of her body, voices making lewd suggestions in regard to Christ; she was afraid to repeat what she heard fearing that she would go to hell. She also heard voices from the outside, they told her she would drop dead; she thought it must be wireless telegraphy. She said in regard to the voices—"my brain seems to turn with them, I have no will power."

After a month in the hospital she had become extremely languid and apathetic; notwithstanding continued efforts to gain her interest and to crowd out the ruminative lapses she could not be induced to occupy herself in any way and was very careless about her appearance. Frequently she would throw herself on the floor, whimper and talk of dying. She explained this as a reaction to voices which suggested that she should drop dead. Once she referred to her behavior in Bellevue: "I was very violent and I thought I was Jesus—I jumped on the radiator and sang, thought I was a bird and a parrot." Once she suddenly sprang up from her chair and said that people downstairs were pulling strings; another time she was seen standing by the table running her fingers along the edges; when asked to explain this she said: "*It's all braining.*"

During November, 1907, the patient appeared a little brighter, but she was still extremely languid, listless and apathetic; she expressed many strange ideas and peculiar feelings—*e. g.*, "It seems that people get possession of me in some way through my ears." When asked what she was occupied with she replied: "Something twisted my brain —these people that walk around talk with their feet—my brains have floated down my back" (smiling). When asked if her thoughts were connected she replied: "No, they fly around as though they go out of my ears and float."

Once during the interview she suddenly began to moan, breathed deeply and put her head down on the table. When asked to explain this behavior she said that she felt something in her cheek like 'meat' and thought she heard a young man's name mentioned, a butcher whom she had previously been interested in.

At a later occasion she gave a long statement difficult to understand except as a mixture of reminiscence and sexual symbolism. At present she is largely absorbed by her scattered ruminations, with excessive and forced play of her features. She does not utter her dream-life above a whisper, and in fragments; is unapproachable, and only rises to the level of communication in asking for her hat to go home to her mother, giving the correct address.

Here hereditary deficiency, deterioration of concrete interests with ill-founded and ill-directed aims, and a total missing of her level, with early masturbation and sexual ruminations and poorly controlled ambitions, led away from concrete productivity and from the checks and props of helpful environment and finally to a break of compensation in a sexual experience and a dream, and ideas that men could see her shame, then a pseudo-compensation by fantastic and partly dissociated or hallucinatory (disowned) ruminations in the form of voices and thoughts of uncontrollable and lewd contents, at the same time with queer feelings about her brain, growing preponderance of stilted words, facial expression with exaggerated grimaces and twitchings, discrepancy of mood and thought (laughing when saying that she was afraid of being killed), and a gradual crowding out of the normal thinking and grasp on facts and tendencies by the wholly demoralized gushes of fancy and mental self-abuse. No interests to which to appeal;—progressive deterioration.

While *these* disorders are mainly examples of a gradual and diffuse *deterioration of concrete interests*, the following case presents a striking evolution of a side-tracked complex of specific *longings* to the point of a compensatory fulfillment. A Jewess free of heredity, of rather perverse and stubborn disposition and with outbursts of temper as a child, became an efficient dressmaker, married at 23 a rather inferior man, and was an excellent and efficient wife but excessively jealous. She was crazy for children, but remained sterile. Treatment in 1892 and again 1902 availed nothing; 1902, when run down from a septic infection of the hand, she was told she could never have any children and was greatly upset. She was then subject to vivid *dreams* in which she was attacked. A few months later, a physican suggested an operation for uterine tumor, but she made a scene, called him a bandit and a murderer. Soon after that she began to disclose that she was sure the physician who treated her in 1892 had removed a child from her as she 'was then pregnant.' She said she had seen her boy in the park, asked newsboys to find her Benny, and finally upbraided a physician for *keeping* her child for experimental purposes and was arrested. At the hospital she repeated these fancies in a perfectly orderly fashion, gradually began to promise to let the matter drop and in two months she was taken home. Three months later she resumed her accusations, claimed she was being operated on every night, that doctors damaged her brain away; the papers pictured her as the mother of imagination. She was returned, thought she was pregnant, had nocturnal hallucinatory experiences, spoke of conspiracy, and said the nurses went with her husband. Operative removal of the uterine fibroid had no effect. Gradually the number of her imaginary children grew to ten and more. The husband was declared to have become a millionaire through the money the doctors had given him for the opportunity of experimentation. She again learned to smooth over her ideas, but after a few months at home she returned as daughter of the Queen of Russia, with elaborate systematizations. She is a good worker in the sewing room, discusses her situation pleasantly and coherently if tactfully treated, still asserts that she is pregnant—a typical paranoid compensatory wish-fulfillment, gradually attained after a period of dream experiences uncorrected in her waking life.

From these grave cases many transitions lead over to those in which we see mainly episodic tantrums break through, usually in the form of conflicts, or of wish fulfillments with varying elaboration within the situation, and a number of more or less characteristic traits that mark the disorders as reactions to complexes, faulty and perverted attempts to meet more or less real difficulties and breaks of integration. The chief point is that concrete difficulties and states of tension can be demonstrated and that the course shows a distinct relation between balancing material and further evolution.

We should have to refer further to those cases in which as a rule definite strings of developments appear in a person either originally with difficulties of make-up, or transformed or made unresistive through progressively deteriorating habits of adjustment.

Another case is that of a bright young woman who went through nine months of a catatonic attack with a delirious episode, negativism,

refusal of food, retention of saliva, stereotyped attitudes, echolalia, grimacing, etc.; improved at the end of nine months, went home almost well, but in a few months became sleepless, harped bitterly about fantastic ill-treatment at the first hospital to which she had been taken, again refused food, complained of pain in the left shoulder, improved slowly at the hospital, was again better and might have gone home if the circumstances had permitted; then got worse again and says now, she has no touch with her real environment; her mind dwells on the old story of ill-treatment and she hears remarks on it; she is made to suffer here for another woman; she had refused work for months out of a feeling of aversion and disappointment when transferred to a ward for more chronic patients, but even here was again found at work and much more affable after a review of her situation. Yet this woman is, through fate and the development of her make-up, relegated to the ranks of disappointments of treatment.

Good informants saw nothing peculiar in her and called her efficient, practical, not dreamy. On closer inquiry she was described as very scrupulous about the feelings of others, and equally sensitive to slights, proud of her appearance and reputation, so prudish that she would never undress in the presence of her sister and unusually sensitive about references to sexual matters. She had times when she wanted to be alone and felt nervous and complained of weakness and stomach troubles. Her father had died insane; and a brother (one of five) had had epileptic insanity. The patient herself complains that she *never* was practical; she was a great reader and her sister tells us of a huge scrap book of poetry. From 1905-07 she stayed away from confession. A young woman against whom her sister had warned her, introduced a man to her concerning whom she first spoke with aversion, but who evidently fascinated her under a decided conflict. She was much mortified because she found out that he was a divorced protestant and he left her after having hurt her shoulder by lifting her up playfully, and after borrowing some money. This was followed by another blunder and conflict; although deeply averse to divorces, the patient helped a young woman get evidence for a divorce from a supposed bigamist, worked all her spare time and found out in the end that there had not been any marriage at all. This was followed by her moving to another city; there the conflict preyed on her and a depression came on which rapidly led to a catatonic climax, without the slightest attempt at rapport on the part of the patient or physician, until she was transferred to another hospital and finally discharged after an illness of nine months. The pain in the shoulder which had recurred when she came to us disappeared after an electrical examination of the really existing slight atrophy. The details of the development and the reminiscences from the first hospital were then gone into, but evidently not traced completely to a balance or to the fundamental sore points. The circumstances of her family and the crowding of the hospital necessitated compromises to which she reacted unfavorably several times after a certain level was reached; she relapsed and got out of touch with her real environment. She says distinctly—'my mind is always away from here.' Yet the adjustments in changing the mere ruminations into open discussion and giving space for direct and concrete interests has an unmistakable influence on the patient.

As a purely transitory disorder but with a host of 'pseudo-spontaneous experiences' and feelings of being *made* to do things, I should like to refer to a girl of 23 who made as it were a spontaneous recovery under mere quieting treatment and simple straightening out of the puzzle. Rather inefficient, unable to adjust her work and interests

smoothly, never holding her places as servant long, often sulky, shut-in, and with few friends, without any heredity and denying sexual abuse, the patient had become more self-absorbed about New Year, 1904; in March she had a short attack of articular rheumatism. After it she was even more self-absorbed, was sent on a vacation, after that began to offset the actual condition by claiming that her work was better, that the other girls made trouble and were jealous; at other times she remarked she had something terrible on her mind. An ultimatum about her inefficiency in November finally made her pass into a state in which she was odd, untidy, adding 'thank you' to everything she said, even to her sister. When a man came into the house she ran away, got on her knees and prayed. The next morning, after a few moments of normal manner, she had to be taken to the hospital and disclosed a whole complex of imaginative material, that a young man used to come to her room at night, that she felt she was pregnant, and then stopped feeling the movements; she must have conceived from a spirit, etc. She was run down, admitted dreaming much. Examination spoke against all possibility of her claims. But she described how the feeling developed, how her head felt queer, how she felt her head move, and her hands as if practicing the piano, but without *hearing* orders or voices or music. Even her work was at times forced on her in this pseudo-spontaneous way. One time she lost her speech for a few minutes although she could work her tongue. She gained rapidly, gradually became less apathetic and described the experience with full appreciation and employed herself. She was discharged restored in three months. It is not difficult to see in the whole experience a wish-conflict, traced to a man who lived in the house in the spring but who hardly ever spoke to her. The constitutional make-up with conflicts in her ordinary reactions, a certain amount of ill-health, frequent dreams and finally a tantrum, without the systematic amnesia of hysteria, gradually resolved again without complete ventilation of the entire mechanism. The observation dates from 1905. No catamnestic facts obtainable.

These sketches must suffice. They should show that they deal with developments far from being inconceivable as chains of faulty mental adjustment and far from demanding artificial explanations by specially invented poisons, and a clamoring for invented "things back of it all," if at least we acknowledge the long time and mass of doings and their kind.

These conditions have been grouped together by Kraepelin under the term Dementia Præcox, embracing derangements which very often tend to end in peculiar defect conditions, ranging from the not infrequent cases of simple disappointment of parental hopes by apparently promising individuals who fail to make their mark, to cases with rather characteristic mental upsets and characteristic usually progressive apathetic dementia.

These cases do indeed make a group worth distinguishing as a nosological entity and they offer certain common and characteristic traits always carrying a warning that the tendency is towards deterioration. The unfortunate feature of Kraepelin's view is that this possibility or great probability is made to appear as a great dogmatic certainty, dictated by

merely suggestive but not causally correlated signs which are seen in the end-stages and appear also in the very beginnings, as mere empirical ear-marks, merely classified as disorders of emotion and volition, hypothetically due to toxines and brain-lesions, but not reduced to any chain of cause and effect.

The picture as a *whole* makes the *diagnosis*. There are no decisively pathognomonic facts. The deterioration gives the disorder its name; but it need not always be realized; the essence of the process is a hypothetical toxic influence or disorder of metabolism — entirely hypothetical — with definite brain-lesions—also vague and not explained. What he deems essential comes out most clearly in his differential diagnoses, where we find the enumeration: emotional apathy, and specific disorders of will: negativism (mutism, refusal of food, etc.), automatism (catalepsy, echopraxia and echolalia) and mannerisms (grimaces, oddity, stereotypy, verbigeration), silliness, unaccountable and odd acts, etc.

This description, to a great extent taken over from Hecker and Kahlbaum, figured originally under the 'degenerative' disorders. There it would be a mere dispute about words to debate whether or not the early symptoms were evidence of the disease or not. The fact that these early signs *need* not lead to more trouble might still be compatible with calling them degenerative, and the mental factors *might* be admitted to play a more or less active rôle in the development of those cases which progressed further. But in 1896, Kraepelin, taking general paralysis as the paradigm of psychiatry — each disease having a definite etiology, definite course and outcome —included a much wider range of cases in the original group, viz., practically all cases of the simple psychoses which tend not to recover or are apt to deteriorate in the end; and he explained them all as disorders of autointoxication with a special assumed brain-disorder. Then the question might have arisen: If we deal with a toxic state where does it become established and when; and what would we have to modify to prevent it? What rôle do the biological reactions play which represent the early symptoms?

Kraepelin purposely declines any idea that special antecedents in the life of the patient are worth considering as causal or even as aggravating dynamic factors. About 20% would, according to him, show some early premonitory signs like seclusiveness, oddity, excessive religious devotion, moral instability, but trusting his *deus ex machina* he sees in this mere evidence of a very early setting-in of the so-called 'disease itself.' As a matter of fact the cases in which early symptoms *are* found are much more numerous than 20%; as I claimed in 1903, a very *large* number of these cases show what Hoch has

lately called a shut-in personality, specially exposed to inner friction,—a percentage of actual demonstration about as great as that of actual demonstration of evidence or suspicion of syphilis in general paresis. Kraepelin, however, underrated these facts and by absorbing many doubtful and poorly analyzed cases in his group came to suggest that this disease might befall any one, and that it was an autonomous brain-disease.

Even in the hands of the originators of this new large entity embracing all the cases passing into apathetic deterioration and many others that at least tended to deteriorate, the definition of the term is evidently much more fluctuating than the uncompromising theory would suggest. In Heidelberg it has fluctuated from 8% to 52%, and now back to 18% of all the admissions. In the Munich clinic the optimistic tendency is still more on the increase and fewer cases are dubbed dementia præcox on the female side than on the male side. The inevitable conclusion is that between dementia præcox and manic-depressive insanity and simple psychopathy there is an uncertain territory which refuses a categorical arrangement in the easy and simple dogmatic terms that 'some disorders *must* be a deteriorative brain-disease because they early present certain signs also seen in actually accomplished deteriorations' and the claim that it would be futile to make an effort to analyze the data as a whole in terms of cause and effect.

To this empirical and formal conception I have opposed for a number of years a conception which aimed to be less dogmatic and more likely to be conducive to the determination of the facts actually present in the cases in terms of an experiment of nature, in terms of determinable initial constellations, reactions with probabilities rather than fixed laws of termination; in terms of dynamic and possibly modifiable factors and in terms of natural non-dogmatic developments, to quite an extent measurable in advance by the facts at hand in the case and not merely by the intermediary of a dogmatic fate-like noumenon or largely hypothetical construction.

As dynamic factors in these developments there stand out certain activities and states of disturbed balance and regulations which have far-reaching effects upon the mental adjustments themselves, and *incidentally* upon the organic understructure of the personality.

We have so far failed to find any tangible poisons and infections as in any way essential in the process. The extent to which regulative substances akin to hormones may play a rôle and figure as non-mental short-cuts of reaction is a problem for the future to decide. Berkley's claim of hyperthyroidism is not very convincing to one familiar with a goitre-district and large numbers of thyroid affections; Kraepelin's suggestion

that the poison may have some relation to the sexual functions merely flirts with the truth and is so vague as to demand consideration only if actual facts can be adduced and other facts should fail.

On the other hand, we find in evidence factors which are apt to shape or undo a life—specific defects or disorders of balance, with special tendencies and *habitual* ways of bungling and substitutions and a special make-up which is liable to breakdown in specific manners.

In my first formulation of the situation in Toronto (*British Medical Journ.*, Sept., 1906), I started from the paradigm of *complete action* as the function which gets more and more disorganized by first trivial and harmless *subterfuges* or *substitutions* which, in some individuals, lead further, become harmful and uncontrollable, tend to assume types of definite anomalous mechanisms, unintelligible and crazy if viewed apart, but more or less intelligible as a string of actions substituting, and often missing, an efficient adjustment to concrete and actual difficulties.

These substitutions constitute the symptomatology and chains of events which we have found in the cases described and which I need not rehearse and analyze before you owing to the shortness of the time and because the facts in the cases described are more trustworthy than verbal formulas. Suffice it to say that we meet neurasthenia, hysteria or psychasthenia-like substitutions, or mere dilapidations of interests or states of conflict or depressions of a morose, *topical* character—usually with one or more initial tantrums of the character described,—and delusional developments either with episodes of ruminations and giggling and the like, which may absorb more and more of the patient's actual life, or catatonic developments, or paranoia-like delusional states, all with a number of ear-marks: in the main freedom of the hysterical haziness and tendency to systematic amnesia, but evidence of conflicts of reaction, of blocking, of peculiar automatic interferences, *i. e.*, evident disorders of the highest integrations, and fantastic ruts especially in the sexual or religious spheres and their symbolic elaborations, with very frequent dissociation of the personality and pseudo-spontaneous experiences; further, a growing divorce from the concrete environment, a deterioration of interests and perversion of impulses and actions.

I must pass over the systematic attempt to account for the various symptomatic mental and non-mental developments, as I am convinced that the complete account of the cases with their concrete settings and developments is bound to be the best and only safe basis for deductions, although I realize that the brevity of the sketches left untouched many legitimate

queries, especially those about the non-mental or so-called physical components of the reactions, and the possibility of accounting for them with habitual substitutions and habit-conflicts. I only wish to refer to the catatonic reactions which are especially often mentioned, not only as being oftenest connected with certain brain lesions, but as being unexplainable from the psychological side. The catatonic reaction is by no means so far from yielding to a psycho-biological interpretation. It is a breaking down of normal conduct and adaptation too closely related to what is seen in hypnotic states and in mystic fancies; too directly like stages in religious symbolism and feelings of submission to influences by mystic powers to be compared with what happens in organic psychoses. In general paralysis and arteriosclerosis and senile deterioration, it is not the *synthesis* into a personal integration that is *most* lacking, but the *material* used in the synthesis is decreasing, through lack of memory, judgment and the range of capacity, without any distinct following of the lines of functional cleavage in the process of disorganization. In dementia præcox the dissociations follow the lines of functional and topical complexes. The very frequency with which especially catatonic reactions appear outside of the actual deteriorations, though preferably in dementia præcox, would corroborate their interpretation as a specific functional reaction type possibly founded on a phylogenetically very old reaction partly of protection or partly of mystic surrender. If they are apt to appear occasionally in organic psychoses, the same holds for manic-depressive and other more essentially psychogenetic reactions. It is, however, certainly significant that catatonic disorders are *most* apt to accompany the *traumatic* forms of organic disorders, such as also produce hysterias and other after-effects most likely connected with a functional shock. In the simple *dilapidation* and the paranoic developments, the psychological staging is too much in keeping with the situation and the harmonious evolution on prevailing premises, to create serious doubt against an essentially functional interpretation of the evolution and, also, of the lesions which may be found.

Sizing up the disorder in terms of a break in the working of conflicts, of balance rather than in terms of an autonomous disease of the brain, will stand and fall with the extent to which the initial data allow us to predict the course of nature's experiment, a point concerning which only the publication of casuistic material will give sufficient proof. Our work with these principles warrants the conclusion that while general paralysis is *relatively* incalculable in the *details* of its course, and certainly remarkably *in*dependent of mental determinants, the fluctuations observable in dementia præcox are decidedly too of-

ten accounted for by renewed up-sets and tangles and irritation of idiosyncracies, and that the prognosis of the ultimate tendency is remarkably often foretold, so that of the cases interpreted as actual deteriorations but few surprise us with a recovery, and those that *do* recover are as a rule specified at the outset as cases merely akin to this group worth naming by the end-stage, but with varying amounts of balancing material. Such a disorder is, to be sure, as little open to *absolute* prediction as life's vicissitudes, and a continued test of estimates of events in the light of ultimate results gives one a certain reserve and modesty; but, with it all, the conviction grows that the factors depended on in the estimate of the make-up and in the ratio of the reaction and balancing material, are really *factors at work*, and leave less and less space to a craving for what is 'back of it,' instead of attention to what is the 'go.'

Where a break or morbid reaction has once set in, it is very difficult to bring relief directly. The fundamental shutting in and the whole mechanism enables the preoccupations to live themselves out and to exclude interference. Automatic resistance against the most natural impulses frustrate even the occasional pathetic spontaneous appeals of the patient for help. The best procedure is to tide over the acute tangle with as much tact and ease as possible, to promote relaxation, and to relieve the situation wherever that can be done, bearing in mind the facts obtained referring to the upsetting factors, the probable complex-constellations and prevailing physical disorders. As soon as the patients feel that they meet with help instead of an argumentative and corrective attitude they can be led considerably when the time comes or where the difficulty has not led to complete blocking. Then a positive re-education in the form of habit-training and of readjustment has to set in. It is obvious that experience brings a certain divination and that individual capacity plays a decided rôle in the straightening out of the difficulties, both during the tangles, and in ultimately marshalling the forces to a more practical unity and level again; it is also obvious that we cannot be very optimistic in most cases, as little as when we try to win over our less unbalanced neighbors to a better mode of thought, belief and conduct and behavior.

We owe to our European guests, Professor Freud and Dr. Jung, the demonstration that what is at work in the centre of the stage is a complex or group of complexes consisting of insufficiently balanced experiences in various ways modified by symbolism. Their ingenious interpretations have made possible a remarkable clearing up of many otherwise perplexing products of morbid fancy, in ways the discussion of which, no doubt, I had better leave to their lectures.

Yet, if I interpret their accounts correctly the reason why only few persons create these complexes and fewer yet develop them to a disastrous form and often to a deterioration, is mainly left to heredity or finally to toxines, whereas I would prefer to adhere to my attempt to define the responsible factors as far as possible in terms of prophylactic suggestiveness, in terms of untimely evocation of instincts and longings (acting as fatally as premature destruction of naïveté), and ensuing *habit-conflicts* with their effects on the balance of the person, and on the sum total of mental metabolism and actual doings and on the capacity for regulations in emergencies. In some cases the *habit-disorders* preponderate in the side-tracking and the curbing of leading interests and creation of disastrous substitutions; in others, definite complexes play a special rôle and as a rule the sizing up of the disposition must consider both factors. In practically all cases the scope and funds of mental deviation form a consistent evolution and offer the safest material for prognosis and practical handling.

For all I can see the main obstacle to a wider acceptance of a functional theory in terms of habit and complex conflicts and definite responses thereto, is on the one hand the habitual or intentional lack of the necessary penetration into the life of the patient and family, and on the other hand, the readiness of the physician to turn to set interpretations and to reiterate authoritative statements with a certain pedagogical self-sufficiency. I refer especially to the traditional rut shown by physicians when they have to meet the question of habit-disorders, such as masturbation, which invariably leads to reasoning in a circle by calling the disorder a sympton of a disease and evading the possible rôle in additional abnormal developments instead of to a frank inquiry into the facts and difficulties in the case. Further, there is perhaps also a more or less legitimate aversion to any extreme dogma, using too exclusively the sexual origin or the weight of complexes, and special displacement mechanisms, and an aversion to certain other 'atomistic' types of psychopatholgy, and especially also the fact that so many spontaneous recoveries occur and also many failures under almost any procedure.

The most serious cause for relapses into opposition to psychogenetic interpretations is the blind acceptance of any anatomical findings as definite evidence of an autonomous disease, after the paradigma of general paralysis. And to this point I wish to give a brief discussion.

The lesions found by Sioli and others are very different from those of general paralysis in their nature *and* as to autonomy of origin. They are most akin to fatty involution of the brain tissues, probably as incidental to the disorder of function as is

the brown atrophy of the heart, the fatty degeneration of muscles or of the liver. The one disease in which disorders similar to those in dementia præcox, and even more marked, have been seen, is Huntington's chorea which is a striking instance of familial insufficiency of the nervous system, and hardly a product of a toxic disorder. The occasional late recoveries of apparently demented patients and the peculiar clearing up of some cases during intercurrent diseases—in which the most *vital* instincts of self-preservation and of complex-free family interest are brought out again—would certainly make one doubtful about the "profound deteriorations of the cortex" being on an autonomous basis as in general paralysis. Until we know much more about the amœboid neuroglia and the protagon degeneration seen in dementia peæcox *and* in Huntington's chorea and probably elsewhere, we certainly do well to leave open the question whether a disorder of anabolism and catabolism incidental to the prolonged and often profoundly vitiated attitudes and defects of balance is not sufficient to explain the findings (which are possibly as incidental to special chronic disorders of function as the finding that Dr. Hodge has established in acute fatigue states), or to what extent they are perhaps short-circuits; that they are incidental to a broad frame, seems unshakable and the more we teach the physician to think in terms of what is demonstrable in the case, the better for him and for the patient and for prophylaxis and for the formulation of further problems of investigation.

The lesion in general paralysis is of a totally different kind, depending on a previous infection with syphilis and forming a peculiar infiltration of the brain vessels, similar to what happens in the African sleeping sickness, but accompanied by additional degenerative processes in the brain tissue. This exogenous disturbance leads to death within a limited number of years, and accounts for certain fundamental symptoms of dementia of a kind quite different from that in dementia præcox. In addition to that, there are, however, symptoms not common to all cases, such as the development of exaltations or depressions or delusional states, sometimes following certain traits of dementia præcox. These superadded psychotic symptoms have been attributed to different localizations or distribution of the characteristic lesions. A careful inquiry into this question on the material in the literature and our own observations of focal general paralysis shows, however, that the focal lesions may give aphasic attacks or neurological disturbances, and occasionally precipitate epileptiform reactions with amnesic phases, fugues, and states of bewilderment; but the psychotic symptom-complexes occur without any regularity. In one case of Alzheimer a dementia præcox-like disorder of

paranoid hallucinatory developments was connected with special affection of the left parieto-temporal region, but the patient had had an earlier attack six years before the suspicion of general paralysis arose. Such a case as this and a number of others suggest strongly that these *usually* psychogenetic disturbances depend more definitely on the previous mental make-up, even in the general paralytic, very much as has lately been admitted by Bonhoeffer and Homburger in certain alcoholic and exhaustive disorders—Homburger being a pupil of the Heidelberg school but under the influence of the master of functional pathology, Krehl.

In view of these considerations it is unintelligible that analogy with general paralysis could be strongly enough founded, to excuse a recent writer on the insane in Massachusetts who urges or sanctions on this ground a plea of medical ignorance with the following remarkable conclusion: "Until we have learned more by continuous study of the causation and pathology of dementia præcox, curative measures will be most fruitfully employed in the manic-depressive and toxic cases, to increase the percentage of recoveries and diminish the number of deaths."

The comfort of working under the cover of fatalistic and analyzed conceptions of heredity, degeneracy and mysterious brain-diseases—and the relief from responsibility concerning a real understanding of the conditions at hand, and concerning the avoidance of preventable developments—is a powerful and unconsciously cherished *protection*, very rudely disturbed by these conceptions which make the physician partly responsible for the plain and manageable facts. I deny that fatalism is inevitable, without admitting that my conception should imply unwarranted optimism. It is merely a return to the facts at hand which will prepare us all the better for the actual work, and pave the way towards prophylaxis where something can be done. The position is, however, equally important in the utilization in psychological teaching. There probably is a certain comfort in arranging the courses within a narrow range of laboratory problems. Unfortunately, that does not always train the student's sense in using the foot-rule of ordinary life with any degree of accuracy or conscience, when he passes to more complex domains. Scientific accuracy in one field does not guarantee a critical attitude in the fields of nature's experiments which are complex and cover larger spans. If we make the student wade through a mass of rather artificial psychological laboratory work, and on the other hand, equally artificial philosophical puzzles, we would leave him in the end without help and training to meet some essentials in life. Even a non-technical knowledge of the facts in some mental

patients is bound to widen the horizon and would to my mind be an intrinsic part of any course or programme of psychology (as good as, or better than, an abstract course on mind and body). Without its concrete lessons many events appear like puzzles and are unduly treated as such. This stands out glaringly in a recent book on psychotherapy which makes the reader divide the attitude of appreciation and the attitude of physical explanation without helping him to unite them again; which contrasts the subjective and objective and the purposive and the causal view without bringing them to the common denominator of experience again; which urges him to split psychiatry and psychotherapy—and therein fails to be helpful in the very task of sane instruction, namely, that of integrating disconnected facts into sane 'organized common-sense.' Familiarity with the concrete events in nature's experiments would reduce the longing for these artifacts.

I have on purpose avoided entering upon the details of many excellent modern trends of psychological investigation in our field. I wanted to make a plea for the broader *frame* of things. This frame must be grasped with an understanding of the broader elements in the disorders with which we deal. Within this frame the details get their perspectives. In the theory-ridden physician and in the ultra exact psychological laboratory worker, I should like to awaken the natural instinct of curiosity concerning the keenly interesting broader biological settings brought out by the mental disorders and destinies discussed. I should like to make all feel the sanctity and paramount interest of the concrete cases. I cannot resist recalling what is so well expressed in the recent Presidential address of the great physicist, J. J. Thomson, in his appeal to the mathematician to avail himself of the power of the concrete. He says: "Most of us need to tackle some definite difficulty before our minds develop whatever power they may possess;" and we cannot deny that the field of habit conflicts and of far-reaching and complex emotions and longings gets its most wonderful representatives in disease. Ribot opens his last study with the remark: "Le meilleur procédé d'expérimentation en psychologie, à mon avis, est la maladie aves ses désordres." Diseases are the most crucial experiments in man. Here the momentous things occur in a way which might well supplement the man-made experiments of our laboratories and suggest problems in a way which really go at the causal relationships vital to the student, vital to any layman who wants to know what psychology is and does, and vital to the physician who wants to help also where help would rarely come without him, and may even be too late with him, as long as we fail to make sure of prophylaxis.

We are, I believe, justified in directing our attention to the factors which we *see* at *work* in the life-history of the cases of so-called dementia præcox. We are justified in emphasizing the process of a crowding out of normal reactions, of a substitution of inferior reactions, some of which determine a cleavage along distinctly psychobiological lines incompatible with reintegration. Psychobiological analysis and reconstruction furnish us the essential material, and progress is to be expected from a frank and unprejudiced weighing and use of this material including its non-mental components rather than from the stereotyped lesion-pathology and the dogmatic nosological principles when they become intolerant.

I could not have had a more delightful opportunity to present a discussion of the essential facts in favor of a dynamic conception of dementia præcox than this occasion as I realize that my development has to no small extent been influenced by the spirit at Clark University, its genetic attitude and the liberality in admitting the facts for investigation whether they seemed to fit preconceived plans or not, and its strong faith in the selective capacity of interest and in an unprejudiced inquiry with or without laboratory methods, but always with an interest in the conditions under which reactions develop.